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October 22, 2001

Teachers' Retirement Board
California State Teachers' Retirement System

**Re: Valuation of the Defined Benefit Program**

Dear Members of the Board:

We have performed an actuarial valuation of the Defined Benefit Program of the California State Teachers' Retirement System as of June 30, 2000. In our opinion, the DB Program is an actuarially sound system based on the current actuarial assumptions. Our findings indicate the projected income stream from the contributions mandated by the Education Code will be sufficient to pay the Normal Costs. In addition, the DB Program did not have an Unfunded Actuarial Obligation as of June 30, 2000.

Actuarial valuations are normally performed every two years, as of June 30 of each odd-numbered year. Special valuations were prepared as of June 30, 1998 and 2000.

In preparing the 2000 valuation, we relied upon the financial and membership data furnished by the System, and the Report of Independent Accountants prepared by PriceWaterhouseCoopers. Although we did not audit this data, we compared the data for this and the prior valuation and tested for reasonableness. Based on these tests, we believe the data to be sufficiently accurate for the purposes of our calculations.

Milliman did not prepare Schedules I and II, nor the summary of actuarial methods and assumptions in Schedule II of the Financial Section, nor the information included in this Actuarial Section of the 2001 Comprehensive Annual Financial Report. However, the actuarial information contained in Schedule I of the Financial Section and in this Actuarial Section was derived from our June 30, 2000 actuarial valuation report.

The Teachers' Retirement Board has sole authority to determine the actuarial assumptions and methods used for the DB Program. The Board adopted all of the actuarial methods and assumptions used in the 2000 valuation.

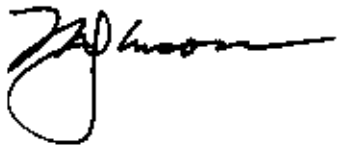
The findings have been determined according to actuarial assumptions and methods that were chosen on the basis of recent experience of the DB Program and of current expectations concerning future economic conditions. In our opinion, the assumptions used in the actuarial valuation are appropriate for purposes of the valuation, are internally consistent, and reflect reasonable expectations. The assumptions represent our best estimate of future conditions affecting the DB Program. Nevertheless, the emerging costs of the DB Program will vary from those presented in this report to the extent that actual experience differs from that projected by the assumptions.

The actuarial valuation was prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the applicable Standards of Practice adopted by the Actuarial Standards Board of the American Academy of Actuaries. In addition, the assumptions and methods used meet the parameters set for disclosures by Statement No. 25 of the Governmental Accounting Standards Board.

The undersigned is an independent actuary, a Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries, an Enrolled Actuary, and experienced in performing valuations for large public employee retirement systems.

In conclusion, the DB Program of the California State Teachers' Retirement System is an actuarially sound system based on the current actuarial assumptions.

Respectfully submitted,



Mark O. Johnson, F.S.A., M.A.A.A., E.A.
Principal and Consulting Actuary

## SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

CalSTRS, through its consulting actuary, performs an experience study every four years to determine appropriate demographic and economic assumptions. These assumptions are then applied when the consulting actuary performs an actuarial valuation to monitor the funding status of the Defined Benefit Program. The most recent experience study for the period 1995 through 1999 was completed as of June 30, 1999. The study was adopted by the Teachers' Retirement Board on February 3, 2000. The most recent actuarial valuation was completed as of June 30, 2000, and adopted by the Teachers' Retirement Board on May 3, 2001. The following summary and tables were prepared by the CalSTRS staff. All information is considered in the June 30, 2000, actuarial valuation.

Following are the assumptions adopted by the Teachers' Retirement Board for this program.

- Investment return rate is 8.00 percent.
- Method used to value program assets for actuarial valuation purposes: Expected actuarial value adjusted for one-third of the difference between actual market value and expected actuarial value.
- Assumption for general wage increase is 4.25 percent of which 3.5 percent is due to inflation and .75 percent is due to expected gains in productivity.
- The actuarial cost method used by the program is the entry age normal actuarial cost method, with actuarial gains and losses amortized over the remaining period required for the amortization of any unfunded actuarial obligation. The board policy is to amortize these components over a period that does not exceed 30 years.
- The extent to which benefits are expected to increase as a result of cost-of-living type adjustments is an annual 2 percent increase to the initial allowance beginning on September 1 following the first anniversary of the effective date of the allowance. Since 1971, this increase is applied to all eligible continuing allowances.

**Table 1 Post-retirement mortality table for sample ages**

| Age | Male | Female |
|---|---|---|
| | 1999 CalSTRS Retired–M | 1999 CalSTRS Retired–F |
| 50 | 0.19 % | 0.12 % |
| 55 | 0.32 | 0.19 |
| 60 | 0.56 | 0.34 |
| 65 | 1.02 | 0.67 |
| 70 | 1.80 | 1.18 |
| 75 | 2.85 | 1.83 |
| 80 | 5.02 | 3.78 |
| 85 | 9.42 | 6.50 |
| 90 | 14.75 | 11.63 |
| 95 | 23.36 | 18.62 |

**Table 2 Probabilities of retirement for sample ages**

| Age | Male | Female |
|---|---|---|
| 55 | 5.0 % | 6.0 % |
| 60 | 20.0 | 12.0 |
| 65 | 20.0 | 19.0 |
| 70 | 100.0 | 100.0 |

**Table 3 Probabilities of withdrawal from active service before age and service retirement for sample ages**

| | Entry Ages | | | |
|---|---|---|---|---|
| **Duration** | **25–29** | **30–34** | **35–39** | **40+** |
| **Male** | | | | |
| 1 | 12.5% | 12.5% | 12.5% | 12.5% |
| 2 | 9.5 | 9.2 | 9.2 | 9.5 |
| 3 | 6.8 | 6.8 | 6.8 | 7.2 |
| 4 | 5.8 | 5.8 | 5.8 | 6.2 |
| 5 | 4.2 | 4.2 | 4.2 | 4.2 |
| 10 | 2.0 | 2.0 | 2.0 | 2.4 |
| 15 | 1.1 | 1.1 | 1.2 | |
| 20 | 0.6 | 0.6 | | |
| 25 | 0.5 | | | |
| **Female** | | | | |
| 1 | 10.0% | 10.0% | 10.0% | 10.0% |
| 2 | 8.3 | 8.3 | 7.5 | 6.8 |
| 3 | 7.3 | 6.5 | 5.5 | 5.3 |
| 4 | 7.1 | 5.6 | 4.5 | 4.0 |
| 5 | 5.8 | 4.2 | 3.5 | 3.0 |
| 10 | 2.0 | 1.7 | 1.4 | 1.6 |
| 15 | 0.9 | 1.0 | 0.9 | |
| 20 | 0.7 | 0.9 | | |
| 25 | 0.6 | | | |

**Table 4 Assumption for pay increases due to promotions and longevity for sample ages (exclusive of the assumed general wage increase, which includes inflation)**

| | Entry Ages | | | | | |
|---|---|---|---|---|---|---|
| **Duration** | **Under 25** | **25–29** | **30–34** | **35–39** | **40–44** | **45 +** |
| 1 | 5.7% | 5.3% | 5.1% | 4.9% | 4.9% | 3.5 % |
| 10 | 3.2 | 3.0 | 2.7 | 2.3 | 2.2 | 1.6 |
| 20 | 1.3 | 1.2 | 1.1 | 0.8 | 0.8 | 0.6 |
| 30 | 0.9 | 0.7 | 0.6 | 0.5 | | |

**Table 5 Economic assumptions**

| | |
|---|---|
| Consumer Price Inflation | 3.5% |
| Investment Yield | 8.00 |
| Wage Inflation | 4.25 |
| Interest on Member Accounts | 6.00 |
| Growth in Active Membership | 0.00 |
| Administrative Expenses | 0.00* |

** Provided by gross investment return*

## *Discussion of recent changes in:*

**The nature of the program**–Since the last experience study as of June 30, 1999, a program amendment has been made that affects the June 30, 2000 actuarial valuation. This program amendment, effective January 1, 2000, is: minimum benefit payable to certain benefit recipients with at least 20 years of creditable service. Minimum benefit is equal to $15,000 with 20 years of service increasing in $500 increments for each additional year of service to $20,000 if the member had 30 or more years of credited service.

**Actuarial assumptions**–The actuarial valuation utilizes various methods and two different types of assumptions: economic and demographic. Economic assumptions are related to the general economy and its impact on CalSTRS or to the operation of the membership. Demographic assumptions predict the future experience of the membership with respect to eligibility and benefits and are directly related to the specific experience of CalSTRS members.

*Economic assumptions*: The two major economic assumptions are investment return and wage growth and each is affected by the underlying assumed rate of inflation. Tables 1–5 provide the economic actuarial assumptions for this program as reflected in the most recent actuarial valuation for the program (as of June 30, 2000).

*Demographic assumptions*: Tables 6–11 provide demographic assumption information for this program as reflected in the most recent actuarial valuation for the program (as of June 30, 2000).

**Table 6 Mortality assumptions**

| | |
|---|---|
| **Retired Members** | |
| Male | 1999 CalSTRS Retired-M |
| Female | 1999 CalSTRS Retired-F |
| **Active Members** | |
| Male | 1999 CalSTRS Retired-M (-2) |
| Female | 1999 CalSTRS Retired-F (-2) |
| **Beneficiaries** | |
| Male | 1999 CalSTRS Beneficiary-M |
| Female | 1999 CalSTRS Beneficiary-F |
| **Pre-1972 Disabilities** | |
| Male | 1951 GAM-M (-1) |
| Female | 1951 GAM-M (-7) |

**Table 7 Termination from disability due to death**

| | |
|---|---|
| **Male** | 1994 GAM-M (Min. 2.5% with select rates in first 3 years) |
| **Female** | 1994 GAM-F (Min. 2.2% with select rates in first 3 years) |

## *Actuarial Methods*

| | |
|---|---|
| Actuarial Cost Method | Entry Age Normal Actuarial Cost Method |
| Asset Valuation Method | Expected Value with one-third adjustment to Market Value |

The asset smoothing method projects an Expected Value of Assets using the assumed rate of investment return, then one-third of the difference between the Expected Value and the Market Value is recognized in the Actuarial Value of Assets.

CalSTRS contracts for all actuarial services. The current contractor, Milliman USA, has been the program's actuary since January 15, 2000.

There are no other specific assumptions that have a material impact on valuation results for this program.

**Table 8 Service retirement (sample ages)**

| | Benefits | |
|---|---|---|
| | **Pre-1999** | **1999** |
| **Male** | | |
| 55 | 5.8% | 5.0% |
| 60 | 25.0 | 20.0 |
| 65 | 20.0 | 20.0 |
| 70 | 100.0 | 100.0 |
| **Female** | | |
| 55 | 7.0% | 6.0% |
| 60 | 22.0 | 12.0 |
| 65 | 18.0 | 19.0 |
| 70 | 100.0 | 100.0 |

The data displayed in Table 12 (on page 62) is as of June 30 of the specified year. Other information, specifically annual payroll amounts, reported in the financial section of this report will generally not be consistent. The reason for this is that the financial data reflects payroll for all individuals who were active during the year, while Table 12 only includes those individuals who are active as of June 30. It does not include those individuals who were active at some point during the year but not as of June 30.

Amounts provided in Table 13 (on page 62) represent the status of the population as of June 30 of the indicated year. The information provided in the Removed From Rolls and Rolls End of Year columns include the application of the annual post-retirement 2 percent not-compounded cost-of-living adjustment.

The data provided for each year end in Table 13 is a snapshot of the population taken following year-end closing for the indicated period. It is likely adjustments will be made subsequent to this closing. No attempt is made to update the data in Table 13 for these adjustments.

**Table 9 Disability**

**Rate of Disability (sample ages)**

*Coverage A*

| | | |
|---|---|---|
| **Male** | 30 | 0.030% |
| | 40 | 0.081 |
| | 50 | 0.159 |
| **Female** | 30 | 0.030% |
| | 40 | 0.090 |
| | 50 | 0.219 |

*Coverage B*

| | | Entry Age Under 40 | Entry Age 40+ |
|---|---|---|---|
| **Male** | 30 | 0.030% | |
| | 35 | 0.051 | |
| | 40 | 0.120 | |
| | 45 | 0.150 | 0.196% |
| | 50 | 0.195 | 0.288 |
| | 55 | 0.270 | 0.390 |
| **Female** | 30 | 0.030% | |
| | 35 | 0.051 | |
| | 40 | 0.090 | |
| | 45 | 0.141 | 0.231% |
| | 50 | 0.231 | 0.360 |
| | 55 | 0.318 | 0.459 |

Because of the potential for post-closing adjustments that are not updated in Table 13, and for post-retirement adjustments that are included in the individual accounts rather than separately maintained, any update of a prior end of year total using additions and deletions from the next year most likely will not equal the total provided for the next year.

An experience analysis was performed for the program in 1995 and again in 1999. As a result of the performance of these studies, changes were made to the actuarial assumptions and to the funding methods. The following significant plan changes have taken place during the time depicted in Table 14. These program amendments include:

*Effective January 1, 1999*

- Increased age factor for members who retire after age 60
- Career factor for members who retire with more than 30 years of service
- Service Credit for unused sick leave

*Effective January 1, 2000*

- Minimum benefit payable to certain benefit recipients with at least 20 years of creditable service. Minimum benefit is equal to $15,000 with 20 years of service increasing in $500 increments for each additional year of service to $20,000 if the member had 30 or more years of credited service.

The most recent actuarial valuation of the system (as of June 30, 2000) determined there is no unfunded actuarial obligation for this program. The prior actuarial valuation (as of June 30, 1999) also indicated there was no unfunded actuarial obligation.

With the exception of the actuarial valuations performed as of June 30, 1998, and June 30, 2000, actuarial valuations are performed every two years in odd numbered years to analyze the sufficiency of the statutory contributions to meet the current and future obligations of the program. By using the actuarial methods and assumptions adopted by the Teachers' Retirement Board, the actuarial valuation provides the best estimate of the program's long-term financing.

Comparing the unfunded actuarial obligation as of two valuation dates does not provide enough information to determine if there were actuarial gains or losses. The correct comparison is between the unfunded actuarial obligation on the valuation date and the expected unfunded actuarial obligation projected from the prior valuation date using the actuarial assumptions in effect for the period of comparison.

Table 15 (on page 63) shows the actuarial obligation and the elements to project that figure forward: the normal cost, less benefit payments, plus a charge for interest at the assumed rate. In addition, the table shows actuarial gains, in parentheses, and losses by individual component.

**Table 10 Withdrawal, all terminations**

| | | | |
|---|---|---|---|
| **Male** | 14,117 | **Female** | 28,460 |

*Rates of termination by sample duration of membership and sample entry age*

| | Sample Entry Ages | | | |
|---|---|---|---|---|
| **Duration** | **25–29** | **30–34** | **35–39** | **40+** |
| **Male** | | | | |
| 1 | 12.5% | 12.5% | 12.5% | 12.5% |
| 2 | 9.5 | 9.2 | 9.2 | 9.5 |
| 3 | 6.8 | 6.8 | 6.8 | 7.2 |
| 4 | 5.8 | 5.8 | 5.8 | 6.2 |
| 5 | 4.2 | 4.2 | 4.2 | 4.2 |
| 10 | 2.0 | 2.0 | 2.0 | 2.4 |
| 15 | 1.1 | 1.1 | 1.2 | |
| 20 | 0.6 | 0.6 | | |
| 25 | 0.5 | | | |
| **Female** | | | | |
| 1 | 10.0% | 10.0% | 10.0% | 10.0% |
| 2 | 8.3 | 8.3 | 7.5 | 6.8 |
| 3 | 7.3 | 6.5 | 5.5 | 5.3 |
| 4 | 7.1 | 5.6 | 4.5 | 4.0 |
| 5 | 5.8 | 4.2 | 3.5 | 3.0 |
| 10 | 2.0 | 1.7 | 1.4 | 1.6 |
| 15 | 0.9 | 1.0 | 0.9 | |
| 20 | 0.7 | 0.9 | | |
| 25 | 0.6 | | | |

*Probability of refund by sample durations of membership and sample entry ages*

| | Sample Entry Ages | | | |
|---|---|---|---|---|
| **Duration** | **25–29** | **30–34** | **35–39** | **40+** |
| **Male** | | | | |
| Under 5 | 100% | 100% | 100% | 100% |
| 10 | 40 | 40 | 45 | 40 |
| 15 | 40 | 35 | 35 | |
| 20 | 35 | 30 | | |
| 25 | 20 | | | |
| **Female** | | | | |
| Under 5 | 100% | 100% | 100% | 100% |
| 10 | 25 | 30 | 30 | 25 |
| 15 | 20 | 30 | 20 | |
| 20 | 20 | 20 | | |
| 25 | 20 | | | |

Actuarial gains reduce the unfunded actuarial obligation as of the valuation date, and actuarial losses increase the unfunded actuarial obligation. Most actuarial gains and losses are a result of short-term fluctuations in experience or changes in actuarial assumptions. Because of the long-term nature of actuarial assumptions, future patterns of emerging experience may offset these short-term fluctuations.

## Independent Actuarial Review

Actuarial services for the California State Teachers' Retirement System are provided under contract by a qualified independent actuarial firm, with additional review provided by the staff actuary.

The work performed for CalSTRS by the independent actuarial firm may be reviewed by the Bureau of State Audits, at the discretion of the Teachers' Retirement Board. Also, through the competitive acquisition process, the work of a prior actuary will be verified in a subsequent actuarial valuation performed by a new contract actuary. Should the same actuarial firm continue for a period of 10 years, provision is made for an independent review of that firm's work through an actuarial audit completed by another firm. These audit services are acquired using the competitive bid process.

**Table 11 Promotional salary increases (assumption for salaries due to promotions and longevity, exclusive of the assumed general wage increase)**

| | Sample Entry Ages (Unisex) | | | | | |
|---|---|---|---|---|---|---|
| **Duration** | **Under 25** | **25–29** | **30–34** | **35–39** | **40–44** | **45+** |
| 1 | 5.7% | 5.3% | 5.1% | 4.9% | 4.9% | 3.5% |
| 10 | 3.2 | 3.0 | 2.7 | 2.3 | 2.2 | 1.6 |
| 20 | 1.3 | 1.2 | 1.1 | 0.8 | 0.8 | 0.6 |
| 30 | 0.9 | 0.7 | 0.6 | 0.5 | | |

**Table 12 Schedule of active member valuation data**

| Date (as of June 30) | Number | Annual Payroll | Annual Average Pay | % Increase In Average Pay |
|---|---|---|---|---|
| 1996 | 336,725 | $12,994,673,531 | $38,591 | 1.8% |
| 1997 | 364,000 | 14,371,068,403 | 39,481 | 2.3 |
| 1998 | 385,530 | 15,725,658,541 | 40,790 | 3.3 |
| 1999 | 402,220 | 17,007,886,951 | 42,285 | 3.7 |
| 2000 | 420,530 | 18,224,271,726 | 43,336 | 2.5 |
| 2001 | 428,741 | 20,494,151,991 | 47,801 | 10.3 |

**Table 13 Schedule of retired members and beneficiaries added to and removed from rolls ($ thousands)**

| | Added to Rolls | | Removed from Rolls | | Rolls–End of Year | | | |
|---|---|---|---|---|---|---|---|---|
| Date (as of June 30) | Number | Annual Allowances | Number | Annual Allowances | Number | Annual Allowances | % Increase in Annual Allowances | Average Annual Allowances |
| 1996 | 7,737 | $186,916 | 4,642 | $55,635 | 150,805 | $2,621,422 | 7.5% | $17,383 |
| 1997 | 6,672 | 163,744 | 4,717 | 59,864 | 153,639 | 2,781,406 | 6.1 | 18,104 |
| 1998 | 7,996 | 206,368 | 4,908 | 64,640 | 157,747 | 2,985,017 | 7.3 | 18,923 |
| 1999 | 7,874 | 236,923 | 5,105 | 69,463 | 161,457 | 3,220,227 | 7.9 | 19,945 |
| 2000 | 8,184 | 261,607 | 5,550 | 78,483 | 165,282 | 3,473,208 | 7.9 | 21,014 |
| 2001 | 9,513 | 369,689 | 5,694 | 92,039 | 170,972 | 4,006,345 | 15.3 | 23,433 |

**Table 14 Solvency test ($ millions)**

| | Aggregate Accrued Liabilities For | | | | | | |
|---|---|---|---|---|---|---|---|
| *Valuation Date (as of June 30) | (1) Active Member Contributions On Deposit | (2) Future Benefits to Benefit Recipients | (3) Service Already Rendered by Active Members | Actuarial Value of Assets | Funding of Liabilities (1) | (2) | (3) |
| 1997 | $17,041 | $29,127 | $23,684 | $67,980 | 100.0% | 100.0% | 92.1% |
| 1998 | 18,451 | 31,158 | 24,625 | 77,290 | 100.0 | 100.0 | 112.4 |
| 1999 (a) | 19,940 | 33,019 | 33,390 | 90,001 | 100.0 | 100.0 | 104.2 |
| 2000 | 21,337 | 36,238 | 35,549 | 102,225 | 100.0 | 100.0 | 109.8 |

**No actuarial report is prepared in even-numbered years, except for the June 30, 1998 report. No estimation using actuarial methodology is made in years between valuations.*
*(a) Effective January 1, 1999, program changed to increase retirement multiplier and add career factor and service credit for unused sick leave.*

**Table 15 Analysis of financial experience (gains and losses in unfunded actuarial obligation resulting from differences between assumed and actual experience) ($ Billions)**

| | Actuarial Valuation as of June 30 2000 | 1999 |
|---|---|---|
| Actuarial Obligation at June 30: | $86,349 (1999) | $74,234(1998) |
| Normal Cost | 2,692 | 2,441 |
| Benefit Payments | (3,515) | (3,220) |
| Expected Interest | 6,983 | 6,005 |
| Expected Actuarial Obligation at June 30: | 92,509 | 79,460 |
| Expected Actuarial Value of Assets at June 30: | 100,659 | 86,150 |
| Expected Unfunded Actuarial Obligation at June 30: | (8,150) | (6,690) |
| | | |
| Actuarial (Gains) & Losses | | |
| Change in Asset Method | | (2,629) |
| Change in Actuarial Assumptions | | (3,187) |
| Investment Return Assumption | (1,566) | (1,195) |
| Demographic Assumptions | 260 | 2,616 |
| Net Change Other Sources | 355 | 7,460 |
| Total Actuarial (Gains) & Losses | (951) | 3,065 |
| Unfunded Actuarial Obligation at June 30: | (9,101) | (3,625) |

## SUMMARY OF DEFINED BENEFIT PROGRAM PROVISIONS

*(The following summary and tables were prepared by the CalSTRS staff. All information is considered in the June 30, 2000, actuarial valuation.)*

### *Normal Retirement*

#### Eligibility Requirement

Age 60 with five years of credited service.

#### Allowance

2 percent of final compensation for each year of credited service.

#### Credited Service

For each year of membership, credited service is granted based on the ratio of salary earned to full-time salary earnable for one position.

#### Final Compensation

Average salary earnable for the highest three consecutive years of credited service for one position.

#### IRC Section 415

Benefits are subject to limits imposed under Internal Revenue Code Section 415.

#### Sick Leave Service Credit

Credited service is granted for unused sick leave at the time of retirement.

#### Career Bonus

If a member has thirty years of credited service, the age factor is increased by 0.2 percent. However, the maximum age factor is 2.4 percent.

### *Early Retirement*

#### Eligibility Requirement

Age 55 with five years of credited service, or age 50 with 30 years of credited service.

### Benefit Reduction

A 1/2 percent reduction in the normal retirement allowance for each full month or partial month the member is younger than age 60, plus a reduction of 1/4 percent for each full month or partial month the member is younger than age 55.

## Late Retirement

### Allowance

Members continue to earn additional service credit after age 60. The 2 percent age factor increases by 0.033 percent for each quarter year of age that the member is over age 60, up to a maximum of 2.4 percent.

## Deferred Retirement

### Allowance

Any time after satisfying the minimum service requirement, a member may cease active service, leave the accumulated contributions on deposit, and later retire upon attaining the minimum age requirement.

## Post-Retirement Benefit Adjustment

### Benefit Improvement Factor

2 percent simple increase on September 1 following the first anniversary of the effective date of the allowance, applied to all continuing allowances.

## Disability Allowance — Coverage A

### Eligibility Requirement

Member has five years of credited California service and has not attained age 60.

### Allowance

50 percent of final compensation

### or

5 percent of final compensation for each year of service credit if over age 45 with less than 10 years of service credit.

### Children's Benefit

10 percent for each eligible dependent child, up to a maximum of 40 percent of final compensation. The increment for each eligible child continues until the child marries or attains age 22. Beginning in 2002, children not registered as full-time students will retain eligibility up to age 18.

### Offsets

Allowance, including children's increment, is reduced by disability benefits payable under Social Security, Workers' Compensation and district-paid income protection plan.

## Disability Allowance — Coverage B

### Eligibility Requirement

Member has five years of credited California service.

### Allowance

50 percent of final compensation, regardless of age and service credit.

### Children's Benefit

10 percent for each eligible child up to four children, for a maximum of 40 percent of final compensation. The increment for each child continues until the child attains age 21, regardless of student, marital, or employment status.

### Offsets

The member's allowance is reduced by disability benefits payable under Workers' Compensation.

## Death Before Retirement — Coverage A

### Eligibility Requirement

One or more years of service credit for active members or members receiving a disability allowance.

### Lump Sum Payment

$5,598 lump sum to the designated beneficiary. If there is no surviving spouse or eligible children, the contributions and interest are paid to the designated beneficiary.

### Allowance

The surviving spouse with eligible children will receive a family benefit of 40 percent of final compensation for as long as there is at least one eligible child. An additional 10 percent of final compensation is payable for each eligible child up to a maximum benefit of 90 percent.

If there is no surviving spouse, an allowance of 10 percent of final compensation is payable to eligible children up to a maximum benefit of 50 percent.

When there are no eligible children, the spouse may elect to receive one half of a 50 percent joint and survivor allowance projected to age 60, or take a lump sum payment of the remaining contributions and interest.

## Death Before Retirement — Coverage B

### Eligibility

One or more years of service credit for active members.

### Lump Sum Payment

$22,394 lump sum to the designated beneficiary. If there is no surviving spouse, the contributions and interest are paid to the designated beneficiary.

### Allowance

A lump sum payment of the contributions and interest.

### or

One half of a 50 percent joint and survivor allowance, beginning on the member's 60th birthday, or immediately with a reduction based on the member and spouse's age at the time the benefit begins.

If the surviving spouse elects a monthly allowance, each eligible child would receive 10 percent of the member's final compensation, with a maximum benefit of 50 percent.

## Death After Retirement

### Lump Sum Payment

$5,598 lump sum to the designated beneficiary.

### Annuity Form

If the retirant had elected one of the joint and survivor options, the retirement allowance would be modified in accordance with the option selected.

If no option had been elected, payment of the unpaid contributions and interest, if any, remaining in the retirant's account will be made to the deceased member's estate.

## Termination from System

### Refund

Refund of the member's contributions with interest as credited to the member's account to date of withdrawal. A refund terminates membership and all rights to future benefits from the System.

### Re-entry After Refund

Former members who re-enter the System may redeposit all amounts previously refunded plus regular interest.The member must earn one year of credited service after re-entry before becoming eligible for System benefits.

## Funding

### Member Contribution

Eight percent of creditable compensation.

### Employers Contribution

Eight percent of the total creditable compensation on which member contributions are based.

### plus

0.25 percent of the total creditable compensation on which members' contributions are based to pay costs for unused sick leave service credit.

**State Contribution**

The state pays 3.102 percent of the total creditable compensation of the immediately preceding calendar year upon which members' contributions are based, calculated annually on October 1, and paid in four equal quarterly payments. Used to fund certain benefit enhancements effective January 1, 1999.

**plus**

Up to 1.505 percent of the total creditable compensation of the immediately preceding calendar year upon which members' contributions are based, calculated annually on October 1, and paid in four equal quarterly payments. This contribution is made if there is an unfunded obligation or normal cost deficit for benefits in effect on July 1, 1990.

## CHANGES IN DEFINED BENEFIT PROGRAM PROVISIONS

Since the last annual financial report, program amendments have been made that would affect the next actuarial valuation. The amendments described below were effective January 1, 2001, and, therefore, not considered for the June 30, 2000, actuarial valuation.

### *One-Year Final Compensation*

Members who retire on or after January 1, 2001 with 25 or more years of service credit have final compensation based on the highest annual compensation earnable during 12 consecutive months.

### *Defined Benefit Supplement Program*

Members who perform creditable service on or after January 1, 2001, will have their member contributions to the Defined Benefit Program reduced from 8 percent to 6 percent of creditable earnings. The remaining 2 percent of creditable earnings will be contributed to the DBS program to provide an additional or supplemental benefit to the member, in addition to the benefit provided by the DB Program. Member contributions to the DBS Program are legislated to continue for 10 years, until December 31, 2010.

### *Longevity Bonus*

Members who retire on or after January 1, 2001 with 30 or more years of service credit are entitled to a longevity bonus paid monthly in their retirement allowance. The bonus is a flat monthly amount depending upon the number of years of service based upon the following:

| | |
|---|---|
| 30 years of service | $200 |
| 31 years of service | 300 |
| 32 or more | 400 |

### *Minimum Guarantee*

The minimum guarantee established effective January 1, 2000, is extended effective January 1, 2001, to certain benefit recipients who did not qualify for the previous minimum guarantee. If the member had 20 years of service at retirement, a minimum allowance of $15,000 will apply (before adjustments for optional survivorship benefits). The minimum allowance increases in $500 increments for each additional year of credited service to $20,000 if the member had 30 or more years of credited service.

### *Health Benefits Program*

The HB Program was established in 2001 to pay Medicare Part A premiums, beginning July 1, 2001, for DB Program members who are retired or will retire prior to January 1, 2006, and who meet certain other criteria. The HB Program is funded as needed from statutory employer contributions that exceed the DB Program annual required contributions.

### *Replacement Benefits Program*

The RB Program was established in 2000 to provide benefits in excess of the Internal Revenue Code 415 benefit limits. The program is funded on a "pay as you go" basis from employer contributions. The first benefits provided under the RB Program were in the fall of 2000. The number of payees in the program is expected to stay small, at June 30, 2001, there were two.

## SUMMARY OF DEFINED BENEFIT SUPPLEMENT PROGRAM PROVISIONS

### *Membership*

**Eligibility Requirement**
All members of the Defined Benefit Program who perform creditable service and earn creditable compensation after December 31, 2000 have a DBS account.

### *Account Balance*

**Account Balance**
Nominal accounts established for the purpose of determining DBS benefits payable to the member. Accounts are credited with contributions, interest at the minimum interest rate, and, if applicable, additional earnings credits.

**Contributions**
One-quarter of the 8 percent of member contributions on creditable compensation are allocated to the member's DBS account.

**Minimum Interest Rate**
Annual rate determined for the plan year by the Teachers' Retirement Board in accordance with federal laws and regulations. The minimum interest rate is equal to the average of the yields on 30-year Treasuries for the twelve months ending in February preceding the beginning of the plan year, rounded to the next highest 0.25 percent. The minimum interest rate is not less than the rate at which interest is credited under the Defined Benefit Program.

**Additional Earnings Credit**
Annual rate determined for the plan year by the Teachers' Retirement Board based on the actual earnings during the plan year but only to the extent the earnings are sufficient to credit the minimum interest rate and provide any additions to the gain and loss reserve deemed warranted by the board.

### *Normal Retirement*

**Eligibility Requirement**
Receipt of a corresponding benefit under the DB Program.

**Benefit**
The account balance at the benefit effective date subject to limits imposed under Internal Revenue Code Section 415.

**Form of Payment**
The normal form of payment is a lump-sum distribution. annuity options are available if the account balance is equal to at least $3,500.

### *Early Retirement*

**Eligibility Requirement**
Same as Normal Retirement.

**Benefit and Form**
Same as Normal Retirement.

### *Late Retirement*

**Benefit and Form**
Same as Normal Retirement.

Contributions and earnings may continue to be credited to the account balance.

### *Deferred Retirement*

**Benefit**
A member must receive a DBS benefit when the corresponding DB benefit is received.

### *Disability Benefit*

**Eligibility Requirement**
Receipt of a corresponding benefit under the DB Program.

**Benefit**
The account balance at the date the disability benefit becomes payable.

**Form of Payment**
Same as Normal Retirement. An annuity benefit is discontinued upon termination of the corresponding DB benefit.

## *Death Before Retirement*

**Eligibility Requirement**
Deceased member has an account balance.

**Benefit**
The account balance at the date of death payable to the designated beneficiary.

**Form of Payment**
Same as Normal Retirement.

## *Death After Retirement*

**Eligibility Requirement**
The deceased member was receiving an annuity.

**Benefit**
According to the terms of the annuity elected by the member.

## *Termination from the Program*

**Eligibility Requirement**
Termination of all employment to perform creditable service subject to coverage under the Teachers' Retirement Plan.

**Benefit**
Lump-sum distribution of the account balance as of the date of distribution. The benefit is payable one year from the termination of creditable service.

## CASH BALANCE BENEFIT PROGRAM–ACTUARY'S CERTIFICATION LETTER

A MILLIMAN GLOBAL FIRM

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October 22, 2001

Teachers' Retirement Board
California State Teachers' Retirement System

**Re: Valuation of the Cash Balance Benefit Program**

Dear Members of the Board:

We have performed an actuarial valuation of the Cash Balance Benefit Program of the California State Teachers' Retirement System as of June 30, 2000. In our opinion, the CBB Program is an actuarially sound system based on the current actuarial assumptions. Our findings indicate the projected income stream from the contributions will be sufficient to pay the Normal Costs. In addition, the CBB Program had an Actuarial Surplus of $517,000 as of June 30, 2000.

Actuarial valuations are performed as of June 30 of each year.

In preparing the 2000 valuation, we relied upon the financial and membership data furnished by the System. Although we did not audit this data, we compared the data for this and the prior valuation and tested for reasonableness. Based on these tests, we believe the data to be sufficiently accurate for the purposes of our calculations.

Milliman did not prepare Schedules I and II, nor the summary of actuarial methods and assumptions in Schedule II of the Financial Section, nor the information included in this Actuarial Section of the 2001 Comprehensive Annual Financial Report. However, the actuarial information contained in Schedule I of the Financial Section and in this Actuarial Section was derived from our June 30, 2000 actuarial valuation report.

The Teachers' Retirement Board has sole authority to determine the actuarial assumptions and methods used for the CBB Program. The Board adopted all of the actuarial methods and assumptions used in the 2000 valuation.

The findings have been determined according to actuarial assumptions and methods that were chosen on the basis of recent experience of the CBB Program and of current expectations concerning future economic conditions. In our opinion, the assumptions used in the actuarial valuation are appropriate for purposes of the valuation, are internally consistent, and reflect reasonable expectations. The assumptions represent our best estimate of future conditions affecting the CBB Program. Nevertheless, the emerging costs of the CBB Program will vary from those presented in this report to the extent that actual experience differs from that projected by the assumptions.

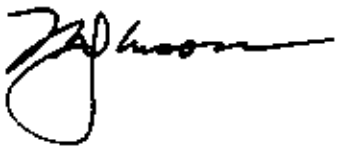
The actuarial valuation was prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the applicable

Standards of Practice adopted by the Actuarial Standards Board of the American Academy of Actuaries. In addition, the assumptions and methods used meet the parameters set for disclosures by Statement No. 25 of the Governmental Accounting Standards Board.

The undersigned is an independent actuary, a Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries, an Enrolled Actuary, and experienced in performing valuations for large public employee retirement systems.

In conclusion, the CBB Program of the California State Teachers' Retirement System is an actuarially sound system based on the current actuarial assumptions.

Respectfully submitted,



Mark O. Johnson, F.S.A., M.A.A.A., E.A.
Principal and Consulting Actuary

## SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

CalSTRS, through its consulting actuary, will perform an experience study at least every four years to determine appropriate demographic and economic assumptions. These assumptions are then applied every year when the consulting actuary performs an actuarial valuation to monitor the funding status of the Cash Balance Benefit Program. The most recent actuarial valuation was completed as of June 30, 2000, and adopted by the Teachers' Retirement Board May 3, 2001. The following summary and tables were prepared by CalSTRS staff. All information is considered in the June 30, 2000, actuarial valuation.

The Cash Balance Benefit Program was established July 1, 1996. The first experience study of the program was completed January 21, 2000. The experience study was adopted by the Teachers' Retirement Board on February 3, 2000, and used to complete the latest actuarial valuation. Following are the assumptions adopted by the Teachers' Retirement Board for this program.

- Investment return rate is 8.00 percent.
- Method used to value plan assets for actuarial valuation purposes: Fair market value.
- Assumption for general wage increase because of inflation is 4.25 percent, of which 3.5 percent is due to inflation and .75 percent is due to expected gains in productivity.
- The actuarial cost method used by the program is the traditional unit credit cost method.
- The Cash Balance Benefit Program does not provide cost-of-living adjustments for benefit recipients.

## DISCUSSION OF RECENT CHANGES IN:

**The nature of the program**—The Cash Balance Benefit Program is a relatively new program, established July 1, 1996. All provisions of the program were considered when completing the most recent actuarial valuation.

**Table 1 Post-retirement mortality table for sample ages**

| Age | Male | Female |
|---|---|---|
| 50 | 0.19 % | 0.12 % |
| 55 | 0.32 | 0.19 |
| 60 | 0.56 | 0.34 |
| 65 | 1.02 | 0.67 |
| 70 | 1.80 | 1.18 |
| 75 | 2.85 | 1.83 |
| 80 | 5.02 | 3.78 |
| 85 | 9.42 | 6.50 |
| 90 | 14.75 | 11.63 |
| 95 | 23.36 | 18.62 |
| | 1999 CalSTRS Retired–M | 1999 CalSTRS Retired–F |

**Table 2 Probabilities of retirement for sample ages**

| Age | Male | Female |
|---|---|---|
| 55 | 5.0 % | 6.0 % |
| 60 | 20.0 | 12.0 |
| 65 | 20.0 | 19.0 |
| 70 | 100.0 | 100.0 |

**Actuarial assumptions**—The following assumptions were used to complete the valuation for this program.

The economic assumptions for the actuarial valuation as of June 30, 2000, did not affect the unfunded actuarial obligation. The economic assumptions for this program will have minimal impact under the traditional unit credit cost method or only have significance when participants elect to annuitize the account balance. Under the program, a participant must have at least $3,500 in his or her account to elect to annuitize the account balance.

The demographic assumptions for the actuarial valuation as of June 30, 2000, did not affect the unfunded actuarial obligation. The demographic assumptions for this program will have minimal impact under the traditional unit credit cost method or only have significance when participants elect to annuitize the account balance. Under the program, a participant must have at least $3,500 in his or her account to elect to annuitize the account balance.

**Table 3 Probabilities of withdrawal from active service before age and service retirement for sample ages**

| | Entry Ages-Female | | | | |
|---|---|---|---|---|---|
| **Duration** | **Under 25** | **25–29** | **30–34** | **35–39** | **40+** |
| **Males** | | | | | |
| 1 | 12.5% | 12.5% | 12.5% | 12.5% | 12.5% |
| 2 | 9.5 | 9.5 | 9.2 | 9.2 | 9.5 |
| 3 | 7.7 | 6.8 | 6.8 | 6.8 | 7.2 |
| 4 | 5.8 | 5.8 | 5.8 | 5.8 | 6.2 |
| 5 | 5.0 | 4.2 | 4.2 | 4.2 | 4.2 |
| 10 | 2.0 | 2.0 | 2.0 | 2.0 | 2.4 |
| 15 | 1.1 | 1.1 | 1.1 | 1.2 | |
| 20 | 0.6 | 0.6 | 0.6 | | |
| 25 | 0.5 | 0.5 | | | |
| 30 | 0.3 | | | | |
| 35 | 0.3 | | | | |
| 40 | 0.3 | | | | |
| **Females** | | | | | |
| 1 | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% |
| 2 | 8.3 | 8.3 | 8.3 | 7.5 | 6.8 |
| 3 | 7.7 | 7.3 | 6.5 | 5.5 | 5.3 |
| 4 | 7.1 | 7.1 | 5.6 | 4.5 | 4.0 |
| 5 | 5.5 | 5.8 | 4.2 | 3.5 | 3.0 |
| 10 | 2.3 | 2.0 | 1.7 | 1.4 | 1.6 |
| 15 | 1.1 | 0.9 | 1.0 | 0.9 | |
| 20 | 0.6 | 0.7 | 0.9 | | |
| 25 | 0.6 | 0.6 | | | |
| 30 | 0.3 | | | | |
| 35 | 0.3 | | | | |
| 40 | 0.3 | | | | |

**Table 4 Assumption for pay increases due to promotions and longevity for sample ages (exclusive of the assumed general wage increase, which includes inflation)**

| | Entry Ages | | | | | |
|---|---|---|---|---|---|---|
| **Duration** | **Under 25** | **25–29** | **30–34** | **35–39** | **40–44** | **45 +** |
| 1 | 6.1% | 5.8% | 5.5% | 5.4% | 5.4% | 4.0% |
| 2 | 5.6 | 5.1 | 4.9 | 4.7 | 4.7 | 3.3 |
| 3 | 5.5 | 5.0 | 4.7 | 4.6 | 4.6 | 3.0 |
| 4 | 5.5 | 4.8 | 4.6 | 4.4 | 4.4 | 2.9 |
| 5 | 5.5 | 4.8 | 4.5 | 3.8 | 3.8 | 2.6 |
| 10 | 3.2 | 3.0 | 2.7 | 2.3 | 2.2 | 1.6 |
| 15 | 1.5 | 1.5 | 1.4 | 1.1 | 1.1 | 0.8 |
| 20 | 1.2 | 1.1 | 1.1 | 0.7 | 0.7 | 0.5 |
| 25 | 1.1 | 1.0 | 0.9 | 0.5 | 0.6 | |
| 30 | 0.9 | 0.7 | 0.6 | 0.4 | | |
| 35 | 0.7 | 0.7 | 0.5 | | | |
| 40 | 0.8 | 0.7 | | | | |
| 45 | 0.8 | | | | | |

**Table 5 Economic assumptions**

| | |
|---|---|
| Consumer Price Inflation | 3.5% |
| Investment Yield | 8.00 |
| Wage Inflation | 4.25 |
| Interest on Member Accounts | 8.00 |

**Table 6 Mortality assumptions**

| | |
|---|---|
| **Retired Members** | |
| Male | 1999 CalSTRS Retired-M |
| Female | 1999 CalSTRS Retired-F |
| **Active Members** | |
| Male | 1999 CalSTRS Retired-M (-2) |
| Female | 1999 CalSTRS Retired-F (-2) |
| **Beneficiaries** | |
| Male | 1999 CalSTRS Beneficiary-M |
| Female | 1999 CalSTRS Beneficiary-F |

**Table 7 Termination from disability**

| | |
|---|---|
| Male | 1994 GAM-M (Min. 2.5% with select rates in first 3 years) |
| Female | 1994 GAM-F (Min. 2.2% with select rates in first 3 years) |

**Table 8 Service retirement (sample ages)**

| | |
|---|---|
| **Male** | |
| 55 | 5.0% |
| 60 | 20.0 |
| 65 | 20.0 |
| 70 | 100.0 |
| **Female** | |
| 55 | 6.0% |
| 60 | 12.0 |
| 65 | 19.0 |
| 70 | 100.0 |

**Table 9 Disability rates (sample ages)**

| | | Entry Age Under 40 | Entry Age 40+ |
|---|---|---|---|
| **Male** | 25 | 0.021% | |
| | 30 | 0.030 | |
| | 35 | 0.051 | |
| | 40 | 0.120 | |
| | 45 | 0.150 | 0.196% |
| | 50 | 0.195 | 0.288 |
| | 55 | 0.270 | 0.390 |
| **Female** | 25 | 0.030% | |
| | 30 | 0.030 | |
| | 35 | 0.051 | |
| | 40 | 0.090 | |
| | 45 | 0.141 | 0.231% |
| | 50 | 0.231 | 0.360 |
| | 55 | 0.318 | 0.459 |

## ACTUARIAL METHODS

Actuarial Cost Method Traditional Unit Credit

Asset Valuation Method Fair Market Value

The actuarial methods used for the program's actuarial valuation as of June 30, 2000, result in an actuarial surplus of $517,000. This surplus is primarily due to the merger of the Defined Benefit and the Cash Balance plans into a single plan with a separate Defined Benefit Program and a Cash Balance Benefit Program effective January 1, 1999, and the discharge of the $1.3 million loan from the Teacher's Retirement Fund.

CalSTRS contracts for all actuarial services. The current contractor, Milliman USA, has been CalSTRS' actuary since January 15, 2000.

There are no other specific assumptions that have a material impact on valuation results for this program.

## INDEPENDENT ACTUARIAL REVIEW

Actuarial services for the California State Teachers' Retirement System are provided under contract by a qualified independent actuarial firm, with additional review provided by the staff actuary.

The work performed for CalSTRS by the independent actuarial firm may be reviewed by the Bureau of State Audits at the discretion of the Teachers' Retirement Board. Also, through the competitive bid process, the work of a prior actuary will be verified in a subsequent actuarial valuation performed by a new contract actuary. Should the same actuarial firm continue for a period of 10 years, provision is made for an independent review of that firm's work through an actuarial audit completed by another firm. These audit services are acquired using the competitive bid process.

The current actuarial consultant was retained on January 15, 2000, as a result of the competitive bid process.

**Table 10 Withdrawal rates (rates of termination by sample durations of membership and sample entry ages.)**

| | Sample Entry Ages | | | | |
|---|---|---|---|---|---|
| **Duration** | **Under 25** | **25–29** | **30–34** | **35–39** | **40+** |
| **Male** | | | | | |
| 1 | 12.5% | 12.5% | 12.5% | 12.5% | 12.5% |
| 2 | 9.5 | 9.5 | 9.2 | 9.2 | 9.5 |
| 3 | 7.7 | 6.8 | 6.8 | 6.8 | 7.2 |
| 4 | 5.8 | 5.8 | 5.8 | 5.8 | 6.2 |
| 5 | 5.0 | 4.2 | 4.2 | 4.2 | 4.2 |
| 10 | 2.0 | 2.0 | 2.0 | 2.0 | 2.4 |
| 15 | 1.1 | 1.1 | 1.1 | 1.2 | |
| 20 | 0.6 | 0.6 | 0.6 | | |
| 25 | 0.5 | 0.5 | | | |
| **Female** | | | | | |
| 1 | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% |
| 2 | 8.3 | 8.3 | 8.3 | 7.5 | 6.8 |
| 3 | 7.7 | 7.3 | 6.5 | 5.5 | 5.3 |
| 4 | 7.1 | 7.1 | 5.6 | 4.5 | 4.0 |
| 5 | 5.5 | 5.8 | 4.2 | 3.5 | 3.0 |
| 10 | 2.3 | 2.0 | 1.7 | 1.4 | 1.6 |
| 15 | 1.1 | 0.9 | 1.0 | 0.9 | |
| 20 | 0.6 | 0.7 | 0.9 | | |
| 25 | 0.6 | 0.6 | | | |

**Table 11 Promotional salary increases (assumption for salaries due to promotions and longevity, exclusive of the assumed general wage increase)**

| | Sample Entry Ages (Unisex) | | | | | |
|---|---|---|---|---|---|---|
| **Duration** | **Under 25** | **25 – 29** | **30 – 34** | **35 – 39** | **40 - 44** | **45+** |
| 1 | 6.1% | 5.8% | 5.5% | 5.4% | 5.4% | 4.0% |
| 10 | 3.2 | 3.0 | 2.7 | 2.3 | 2.2 | 1.6 |
| 20 | 1.2 | 1.1 | 1.1 | 0.7 | 0.7 | 0.5 |
| 30 | 0.9 | 0.7 | 0.6 | 0.4 | | |

## SUMMARY OF CASH BALANCE BENEFIT PROGRAM PROVISIONS

*(The following tables and summary were prepared by CalSTRS staff. All information is considered in the June 30, 2000, actuarial valuation)*

### *Membership*

#### Eligibility Requirement

Membership if employed at less than 50 percent of a full-time position for a California school district, community college district, or county office of education which has elected to offer the Cash Balance Benefit Program.

#### Participant

An eligible employee with creditable service subject to coverage who has contributions credited in the program or is receiving an annuity from the program.

### *Account Balance*

#### Account Balance

Nominal accounts established for the purpose of determining benefits payable to the participant. Accounts are credited with contributions, minimum interest rate and additional earnings credits.

#### Contributions

Generally, participant contributions are 4 percent of salary and employer contributions are 4 percent of salary.

Rules for contribution rates may differ for participants covered by a collective bargaining agreement, but the sum of the participant and employer contributions must equal or exceed 8 percent of salary, and in no event can the employer contribution rate be less than 4 percent of salary.

The Teachers' Retirement Board may adjust employer contributions for a fixed number of years, but the adjustment shall not exceed 0.25 percent of salaries in any plan year.

### Minimum Interest Rate

Annual rate determined for the plan year by the Teachers' Retirement Board in accordance with federal laws and regulations. The minimum interest rate is equal to the average of the yields on 30-year Treasuries for the twelve months ending in February preceding the beginning of the plan year, rounded to the next highest 0.25 percent.

### Additional Earnings Credit

Annual rate determined for the plan year by the Teachers' Retirement Board based on the actual earnings during the plan year, but only to the extent the earnings are sufficient to credit the minimum interest rate and provide any additions to the gain and loss reserve deemed warranted by the board.

## Normal Retirement

### Eligibility Requirement

Age 60.

### Benefit

The account balance at the retirement date subject to limits imposed under Internal Revenue Code Section 415.

### Form of Payment

The normal form of payment is a lump sum distribution. Annuity options are available if the sum of the employer and employee accounts equal or exceed $3,500.

## Early Retirement

### Eligibility Requirement

Age 55.

### Benefit and Form

Same as Normal Retirement.

## Late Retirement

### Benefit and Form

Same as Normal Retirement.

Contributions and earnings continue to be credited to the account balances.

## Deferred Retirement

### Benefit

A participant may cease active service, leave the accumulated account balance on deposit, and later retire upon attaining the minimum age requirement.

## Disability Benefit

### Eligibility Requirement

Determination by the Teachers' Retirement Board that the participant has a total and permanent disability.

### Benefit

The account balance at the date of disability. An annuity benefit is discontinued if the participant is re-employed before age 60, and performs service creditable under the program.

### Form of Payment

Same as normal retirement.

## Death Before Retirement

### Eligibility Requirement

Deceased participant has an account balance.

### Benefit

The account balance at the date of death payable to the designated beneficiary.

### Form of Payment

Same as Normal Retirement.

### *Death After Retirement*

**Eligibility Requirement**

The deceased participant was receiving an annuity.

**Benefit**

According to the terms of the annuity elected by the participant.

### *Termination from the Program*

**Eligibility Requirement**

More than five years has elapsed since the most recent termination benefit, if any, has been paid.

**Benefit**

Lump-sum distribution of the account balance as of the date of distribution. The benefit is payable one year from the termination of creditable service.

## CHANGES IN PROGRAM PROVISIONS

There have been no program amendments that would affect an actuarial valuation of CalSTRS since the last annual financial report was issued. All program provisions were considered in the completion of the June 30, 2000, actuarial valuation.

**Table 12 Schedule of participant valuation data**

| Date (as of June 30) | Number | Annual Payroll | Annual Average Pay | % Increase In Average Pay |
|---|---|---|---|---|
| 1997 | 495* | $2,109,000 | $4,261 | na |
| 1998 | 3,505 | $18,832,000 | $5,375 | 26.1% |
| 1999 | 6,412 | $50,426,000 | $7,864 | 46.3% |
| 2000 | 7,966 | $70,605,000 | $8,863 | 12.7% |

**Active particiants with account balances*

**Table 13 Schedule of retired participants and beneficiaries added to and removed from rolls**

| | Added to Rolls | | Removed from Rolls | | Rolls–End of Year | | | |
|---|---|---|---|---|---|---|---|---|
| Date (as of June 30) | Number | Annual Allowances | Number | Annual Allowances | Number | Annual Allowances | % Increase in Annual Allowances | Average Annual Allowances |
| 1997 | 0 | $0 | 0 | $0 | 0 | $0 | na | na |
| 1998 | 0 | 0 | 0 | 0 | 0 | 0 | na | na |
| 1999 | 0 | 0 | 0 | 0 | 0 | 0 | na | na |
| 2000 | 0 | 0 | 0 | 0 | 0 | 0 | na | na |

**Table 14 Solvency test**

| | Aggregate Accrued Liabilities For | | | Actuarial Value of Assets | Funding of Liabilities | | |
|---|---|---|---|---|---|---|---|
| Valuation Date (as of June 30) | (1) Active Member Contributions On Deposit | (2) Future Benefits to Benefit Recipients | (3) Service Already Rendered by Active Members | | (1) | (2) | (3) |
| 1997 | $164,078 | $0 | $0 | $(393,000) | -240.0% | na | na |
| 1998 | $1,727,705 | $0 | $0 | $2,083,000 | 120.6% | na | na |
| 1999 | $5,000,613 | $0 | $0 | $5,224,000 | 104.4% | na | na |
| 2000 | $10,350,720 | $0 | $0 | $10,868,000 | 104.9% | na | na |

**Table 15 Analysis of financial experience**

| | Actuarial Valuation as of June 30 2000 | 1999 |
|---|---|---|
| Actuarial Accrued Liability | $10,350,720 | $5,000,613 |
| Actuarial Value of Assets | $10,868,000 | $5,224,000 |
| Unfunded Actuarial Accrued Liability (UAAL) | ($517,280) | ($223,387) |
| Funded Ratio | 105% | 104% |